

**REMARKS****Claim Rejections Under 35 U.S.C. § 112**

Claim 6 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 has been amended to more clearly claim the subject matter that the Applicant regards as the invention. Support for these amendments is taught in the present specification at paragraph 0046. Therefore, no new matter has been added by these amendments.

**Claim Rejections Under 35 U.S.C. § 103**

Claims 1, 2 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Sugizaki* in view of *Yu* (U.S. Patent No. 6,495,437). Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Sugizaki* and *Yu* in view of *Akatsu* (U.S. Patent No. 5,717,635). Applicant respectfully traverses this rejection.

*Sugizaki* discloses a flash memory using a high-k charge trapping layer. *Sugizaki* neither teaches nor suggests Applicant's final structure that results from a low temperature oxidation of Al. *Sugizaki* uses chemical vapor deposition to form the aluminum layer. It is well known in the art that the oxidized Al results in a more uniform structure than is achievable by CVD. Additionally, it is taught by the present specification (see paragraph 0046) that this structure formed by low temperature oxidation also results in a higher tunnel barrier on the interface between the oxidized metal layer and the top insulator than between the oxidized metal layer and the tunnel insulator. Paragraph 0046 discusses the excess Al ions that have not been oxidized and the interface between these Al ions and the oxidized Al (Al<sub>2</sub>O<sub>3</sub>) but one skilled in the art will know that this applies to the currently claimed structure. Further, paragraph 0053 of the present specification discusses the electrical differences that result from using low temperature oxidation versus CVD as used in *Sugizaki*.

There is no motivation to combine *Yu* with *Sugizaki* as suggested by the Examiner. There is no stated or suggested need in *Sugizaki* for a more uniform thickness of the tunnel dielectric as provided by *Yu*. Additionally, even if it were obvious to combine *Yu* with *Sugizaki*, and Applicant maintains that it is not, the combination still would not anticipate the present invention as claimed. *Yu* teaches that layer 35 can be an aluminum layer that is oxidized into an aluminum oxide layer 34. However, layer 34 of *Yu* that is formed by oxidation is the tunnel dielectric layer

and not the oxidized charge trapping layer as claimed in the present claims. These are obviously two completely different layers with different functions.

*Akatsu* teaches NOR and NAND EEPROMs. For the above reasons, even if it were obvious to combine *Akatsu* with *Sugizaki/Yu*, and Applicant maintains that it is not, the combination still would not anticipate the present invention as claimed.

**CONCLUSION**

In view of the above remarks, Applicant believes that all pending claims are in condition for allowance and respectfully requests a Notice of Allowance be issued in this case. Please charge any further fees deemed necessary or credit any overpayment to Deposit Account No. 501373.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 312-2211.

Respectfully submitted,

Date: 7/6/06



Kenneth W. Bolvin  
Reg. No. 34,125

Attorneys for Applicant  
Leffert Jay & Polglaze  
P.O. Box 581009  
Minneapolis, MN 55458-1009  
T (612) 312-2200  
F (612) 312-2250